G-001

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Customer: R. Gilbert Moore
Payload Mgr: David W. Yoel
NASA Tech Mgr: Ernest Busboso
Mission: STS-4, June 27, 1982

The Maiden Voyage: When R. Gilbert Moore, a Morton Thiokol Corporation executive, donated the first GAS payload to Utah State University (USU), he presented USU students with a new world of hands-on space research. Students have since generated four payloads, totaling 22 experiments, while assisting other universities and institutions with their GAS projects.

USU's first payload was very ambitious. Students put ten experiments into a 5-cubic-foot GAS container. One experiment grew successive generations of fruit flies to see if microgravity would affect their genetic structure. Other tests examined the effects of microgravity on epoxy resin-graphite composite curing, brine shrimp genetics, duckweed root growth, soldering, homogeneous alloy formation, surface tension, growth rate of algae, and thermal conductivity of a water and oil mixture. A student's master degree thesis surveyed the distribution of temperature within the payload. Perhaps the biggest challenge went to the graduate student who integrated all the experiments into the payload—locating and scheduling their operations so that power and thermal requirements would not conflict.

The G-001 team: (L to R, kneeling) sponsors Gilbert Moore and Phyllis Moore; USU Professor, Rex Megill; (standing) Thiokol Corporation advisor Donald Cook; students Amber Dalley, Russ Laher, Terrance Thomas, David Yoel, James Elwell, Bruce Moore, Walt Moore, Steven Walker, and Kelly Hunt; Thiokol advisors Lynn Hankins and Gladyce O'Dell.